

P. H. JACKSON.
BUILDING CONSTRUCTION.
APPLICATION FILED DEC. 18, 1907.

900,378.

Patented Oct. 6, 1908.

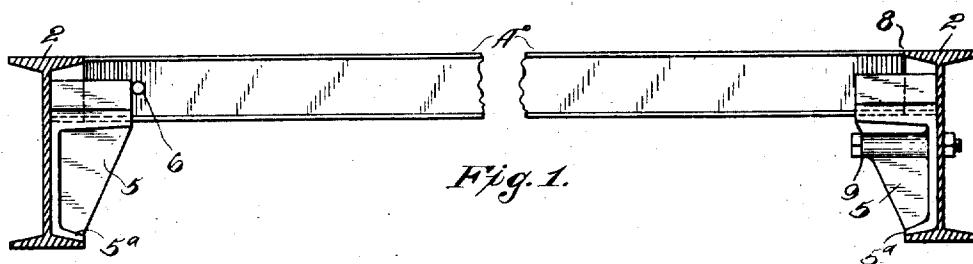


Fig. 1.

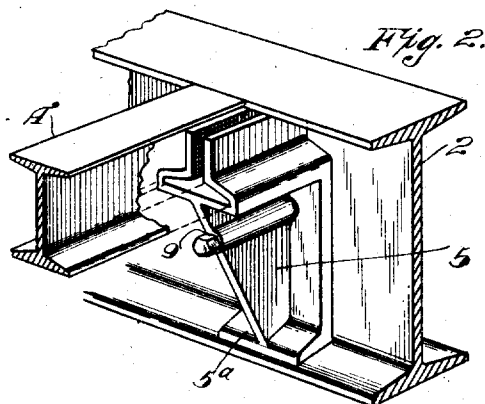


Fig. 2.

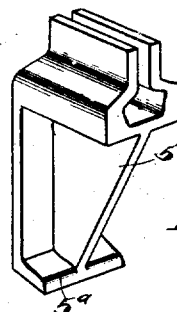


Fig. 3.

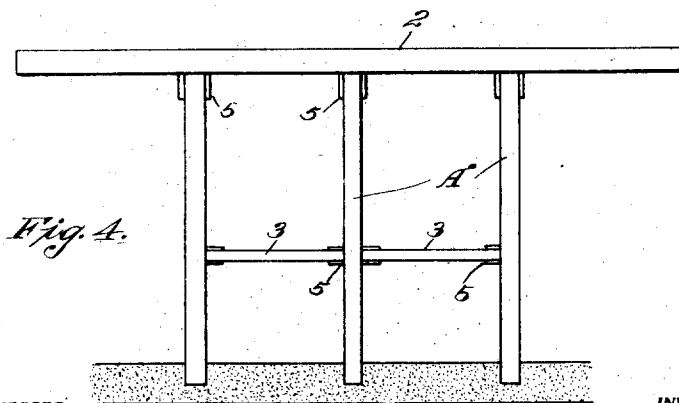


Fig. 4.

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UNITED STATES PATENT OFFICE.

PETER H. JACKSON, OF EAST OAKLAND, CALIFORNIA.

BUILDING CONSTRUCTION.

No. 900,378.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed December 12, 1907. Serial No. 497,047.

To all whom it may concern:

Be it known that I, PETER H. JACKSON, citizen of the United States, residing at East Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Building Construction, of which the following is a specification.

My invention relates to the structural portions of fire-proof and other floors, sidewalks which cover a floor or room beneath, platforms, roofs, bridges, and the like.

It consists in a combination of parts and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side view of the device as applied. Fig. 2 is a perspective view of the same. Fig. 3 shows a modified form. Fig. 4 is a plan view of a header and tail-beams in place.

The object of my improvement is to save labor and expense in framing the parts, and also provide a more convenient mode of adjusting the same.

In the construction of sidewalk, floor, and like devices, steel I-beams extend out from the building toward the curb, as shown at A.

2 are cross-beams or headers which extend along and support the inner ends of the tail-beams; and 3 are cross-beams extending between any two of the tail-beams, forming openings from the sidewalk to support the ends of the sidewalk lights, and sidewalk doors, or if used in floor construction, they would form the openings for stairs to pass between floors, elevator openings, and the like.

In the ordinary construction, the tail and cross-beams are made of I-form, and the flanges at the ends of the cross-beams have ordinarily to be cut to fit against the web of the abutting beam, so that the flanges, especially the top flange, will be approximately flush with the top of the I-beam against which it abuts. The webs of these abutting beams must ordinarily be "coped", as it is called, and angles have to be riveted to the coped portion of the tail-beam, and punched, bolted or riveted through holes made through the web of the header and cross-beams. This is expensive, and my invention is designed to do away with coping the ends of the tail-beams where they join the header, and also the ends of the cross-beams,

and at the same time it dispenses with angles and bolts, and drilling or punching holes for the bolts and the butts.

In my present invention, I have formed an iron, steel, or other metal shoe 5, so channeled that it will slip on to the ends of the tail-beams or the ends of the cross-beams. This metal shoe is recessed entirely through, so as to fit loosely over the ends of the abutting beams, and may go over and slide along on these beams. These beams may be of such length as to just fit between the flanges of the adjacent beams against which they abut; and the metal shoes having first been placed upon the abutting beams, the latter may be properly introduced into their places. Then the shoes are moved forward so that the lower ends 5^a will rest upon the lower flanges of the parallel beams, and the slotted or channeled upper portion inclosing the lower flanges of the abutting beams, the upper flanges of said abutting beams will be in substantially the same plane with the top of the flanges of the beams against which they abut. In order to retain these shoes in place, it is then only necessary to punch holes 6 through the transverse beams just outside of the upper part of the shoe, and by means of a bolt, rivet, or other part driven in, the shoe is held firmly against the web of the beam upon which it is supported; and the end of the transverse beam being firmly held in the slot, with its upper flanges, as before stated, level with the top of the beam against which it abuts, the whole surface will be level. No cutting away of any portion of the transverse or abutting beam is necessary, and it will not be necessary to build up the tops of the beams against which they abut, by plates or bars, so as to make the surfaces even.

The punching of the holes 6 is easily effected at the shop, or if found desirable, at the point where the work is to be set up, and occupies but very little time.

It will be understood that various other means may be adopted for securing the shoe, such as bolting it to the beam upon which it is supported, but I have found that the holes punched in the web of the supported beam, and with pins, bolts, or rivets abutting against the outer or into the sides of the shoes, will firmly lock the whole structure together, and at an expense of one-tenth or

less of that of drilling by hand at the building, where such means for attachment is adopted.

The advantages of this construction may be summed up as follows:

1st.—The opening or channel in the shoe is made entirely through, so that it can slide loosely along the cross-beam, the latter being short enough to set between the parallel beams where it is to be employed.

2nd.—There being no top flange on the shoe there is no projection above the tail or header beam, and no filling of any kind is required to make a level and even surface of support.

3rd.—There is but one hole to be made at each end to firmly support the shoe or bracket and lock the transverse beam to it.

4th.—The cross-beam can be punched in the shop before sending the work to the point of construction.

It will be understood that the slot or channel in the shoe or bracket may be made of a shape to receive any form of transverse beam; either I-beam, angle-beam, T or Z-beams, or flat bars set on edge; or, if desired, railroad iron having a head, flange, and base, said iron being preferably inverted, so that the flange lies upwardly and the head down, the channel being made to fit and slide upon this class of iron.

In some cases, as shown at 8, the end or the ends of the I-beams or header beams are not built into the brick work or otherwise secured against side movement, and in such a case it is necessary to have the beam kept in place against the shoe on the end, that it may not slide away, but be kept up to its work. In such a case I employ a bolt or bolts that pass through a hole or holes cast in the shoe, and through a corresponding hole in the beam against which it abuts, as shown in Fig. 1.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In a structural beam support for floors, side-walks, roofs and the like, the combination of parallel beams, transverse beams abutting said parallel beams and having their top surfaces substantially level therewith, and shoes or brackets of less height than the maximum height of the parallel beams and supported on the latter and having channels in their upper portions opening through the top thereof, said shoes being slidably mounted upon the transverse beams.

2. In a structural beam support for floors, side-walks, roofs and the like, the combination of parallel beams, transverse beams abutting the top flanges of the parallel beams and

substantially level therewith, shoes or brackets of less height than the maximum height of the parallel beams, said shoes having lower portions resting in direct contact with the lower flanges of the parallel beams and having channels in their upper portions, said channels opening through the top of the shoes to allow the top flanges of the transverse beams to overlie the shoes.

3. In a structural beam support for floors, side-walks, roofs and the like, parallel beams, similar transverse beams abutting the top flanges of said beams and substantially level therewith, shoes or brackets having their upper portions disposed below the plane of the top of the parallel beams and the top of the transverse beams and having channels in the upper part loosely slidable upon the transverse beams, bases supported upon the lower flanges of the I-beams, and means for securing said brackets in position.

4. In a fire-proof construction of the character described, parallel beams, similar transverse beams having their ends abutting the upper flanges of said beams and with the surfaces of said beams substantially coincident, brackets or shoes loosely sliding upon the transverse beams and capable of abutting against the flanges of the parallel beams, said shoes or brackets having bolt holes through them, and having channels in their upper portions opening through the top thereof whereby the flanges of the transverse beams overlie the shoes and are disposed substantially level with the top flanges of the parallel beams; and screw bolts passing through the brackets and through the web of the abutting beam to which it is secured.

5. In a fire-proof construction of the character described, parallel beams, similar transverse beams having the ends abutting the upper flanges of said beams, and with the top flanges of said beams substantially coincident, channeled brackets or shoes loosely slidable upon the transverse beams and capable of abutting against the flanges of the parallel beams, said brackets having their lower ends formed to fit and be supported upon the flanges of the I-beams, and a bolt hole through the bracket portion of the shoe, with a bolt extending through the bracket and through the web of the beam securing the shoe to the side of the transverse beam.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

PETER H. JACKSON.

Witnesses:

GEO. H. STRONG,
S. H. NOURSE.